

ABSTRACT OF THE DISCLOSURE

Compositions that can be used in semiconductor manufacturing processes, comprising perhydro-polysilazane having a weight average molecular weight of about 300 to about 3,000 and a polydispersity index of about 1.8 to about 3.0 are provided.

5      Solutions comprising the compositions of the present invention, methods of forming films in a semiconductor manufacturing process, and methods of manufacturing semiconductor devices are also provided.